

Claims

We claim:

1. An end of service life indicator comprising:

a housing member (10),

said housing member having a front side and a back side,

said housing member being constructed of a solid material,

and having a plurality of housing openings (10a) extending from said front side to said back side of said housing member;

each of said housing openings being of sufficient cross-sectional area to allow a fluid medium (F) and particulates (P) to pass;

a filter member (20) disposed adjacent to said housing member,

said filter member comprising a porous solid through which said fluid medium can pass,

said filter member being adapted to adhere to said particulates;

a template member (30),

said template member being disposed adjacent to said filter member,

and said template member comprising a solid material, said solid material being substantially impervious to said fluid medium;

said template member (30) having a front side and a back side and a template opening pattern (50), said template opening pattern comprising an opening in said template member extending from said front side to said back side of said template member.

2. The indicator of claim 1,

further comprising a tacky substance (21), said tacky substance being permanently adhered to a surface of said filter member (20).

3. The indicator of claim 2, further comprising:

attachment means (70) for attaching said housing member (10), said filter member (20) and said template member (30) to a primary filter medium (201) of a primary filtering system (200).

4. The indicator of claim 2, wherein said front side of housing member (10) comprises a color highly contrasted to an expected color of particulate (P) build up such that a colorimetric indication occurs when said particulate build up exceeds a preset threshold.

5. The indicator of claim 2 wherein a color of said front side of housing member (10) is one or more colors selected from a group consisting of black, white, fluorescent yellow, fluorescent pink, fluorescent orange, fluorescent blue and fluorescent green.

6. The indicator of claim 3, wherein said template opening pattern (50) is in the form of alphabetic letters.

7. The indicator of claim 6,
wherein said housing member is constructed of a transparent or translucent material, such that said front side of said filter member is visible from said front side of said housing member.

8. An end of service life indicator comprising:
a housing member (10),
said housing member having a front side and a back side,
said housing member being constructed of a solid material,
and having a plurality of housing openings (10a) extending from said front side to said back side of said housing member;

each of said housing openings being of sufficient cross-sectional area to allow a fluid medium (F) and particulates (P) to pass;

a filter member (20) disposed adjacent to said housing member,
said filter member comprising a porous solid through which said fluid medium can pass,
said filter member being adapted to adhere to said particulates;

a template member (30),
said template member being disposed adjacent to said filter member,
and said template member comprising a solid material, said solid material being
substantially impervious to said fluid medium;

said template member (30) having a front side and a back side and a template
opening pattern (50), said template opening pattern comprising an opening in
said template member extending from said front side to said back side of said
template member;

and further comprising a humidifier (21), said humidifier being permanently
adhered to a surface of said filter member (20);

and further comprising a primary filtering system (200) having a primary filter
medium (201);

and further comprising attachment means (70) for attaching said housing
member (10), said filter member (20) and said template member (30) to said
primary filter medium (201) of a primary filtering system (200);

and wherein said template opening pattern (50) is in the form of alphabetic
letters;

and wherein said housing member is constructed of a transparent or translucent material, such that said front side of said filter member is visible from said front side of said housing member;

and wherein said front side of said filter member has a first color, and wherein said first color is darker than a color of said particulate.